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ABSTRACT

This study, which involved a Malaysian sample, investigated students' and teachers' conceptions of intelligence, and related age and geographic differences. In phase 1, a group of 25 teachers and 196 of their 12-, 14-, and 16-year-old students were asked to describe the characteristics and behaviors of an intelligent student. Responses were used to construct a 38-item questionnaire with a four-point rating scale. The questionnaire was administered to 1,192 students and 205 teachers after modifications were made in the wording of items and instructions based on pre-testing. Preliminary analyses of the data indicated that, for all groups, the mean ratings for the majority of items ranged between very important to important. Some discordance was found between students and their teachers with respect to items in the categories of general abilities, interpersonal skills, and personality. It is argued that the difference in the teachers' and the students' perceptions of intelligence is important because that difference reflects the extent to which attributes highly valued by teachers are being transmitted to their students. (RH)

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TEACHERS' AND STUDENTS' CONCEPTIONS OF INTELLIGENCE

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ABSTRACT

The views of both the teachers and the students about intelligence have been the subject of research interest in recent years, (e.g. Fry, 1984b; Keats, 1986). This study represents a similar attempt involving a Malaysian sample.

Specifically the study attempted to examine the students' and their teachers' conception of intelligence. The study also examined the students' responses in terms of age levels and locality.

The study was conducted in two phases. In phase 1, a group of 25 teachers and 196 students (aged 12, 14, 16 years old) were asked to describe the characteristics and behaviors of an intelligent student. The responses of the teachers and the students were compiled and used to construct a 38-item questionnaire with a four-point rating scale from 1 denoting 'very important' to 4 denoting 'not important at all'.

The questionnaire was administered to a larger sample in Phase 2. The subjects had to rate and then ranked the items.

Preliminary analyses of the data reveal some of the following trends:

For all groups, the mean ratings for the majority of the items ranged between 'very important' to 'important'. Generally there is substantial within -student group agreement. However there appears to be some discordance between the students and their teachers largely with respects to items in the categories of 'General Abilities', 'Interpersonal Skills' and 'Personality'.

TEACHERS' AND STUDENTS' CONCEPTIONS OF INTELLIGENCE

INTRODUCTION

What are the teachers' views about intelligence ? How are their views different from those of their students? These are some of the questions that have been the subjects of growing research interest on intelligence in recent years (e.g. Fry 1984b; Keats,1986).

Teachers are frequently involved in making judgements about their students' performance and ability. To the extent that their judgements reflect their notions of intelligence it would be useful both for practical and research interest to examine the teachers' ideas about intelligence.

Fry (1984b) noted that the teachers'notions of intelligence can arise from two bases. The teacher education programmes that the teachers undergo during their training years expose them to the explicit theories of intelligence. Sternberg et al (1981) earlier suggested that explicit theories of intelligence were theories constructed by the psychologists and other scientists based on information gathered from testing people on tasks presumed to reflect intelligent functioning.

In contrast implicit theories of intelligence reflect th people's (the experts and the lay persons) informal notions of intelligence . They are constructed by them and the task of the research is to discover what these theories are.

The study was made possible by a grant from the Universiti Sains Malaysia.

Sternberg et al (1981) believe that implicit theories are as important as explicit theories of intelligence. While explicit theories are useful as they provide the basis for formal and systematic assesement of intelligence, implicit theories are important because they pervade informal judgements about intelligence in the real world.

In the context of the classroom situations, it can be seen that both the teachers' explicit and implicit ideas of intelligence can serve as important bases of the teachers' formal and informal assessment of their students.

Lately several studies have tried to explore the teachers' and the students'implicit notions of intelligence. For instance Fry (1984b) conducted a series of studies on teachers'conceptions of intelligence. The study involved a group of primary,secondary and tertiary level teachers. These teachers were asked to rate the behavior and attributes of intelligent children. A factor analysis revealed three major factors,namely the cognitive factor, the verbal factor and the social factor. Further the elementary school teachers were found to place more emphasis on social and verbal factors while the tertiary teachers on cognitive factors. The results of the second study which involved asking another group of teachers to rate the characteristics of each factor showed a similar trend in that cognitive factors accounted for 34% of the variance in the ratings of the tertiary teachers, while verbal factors accounted for 8% of the variance in the ratings of the secondary teachers and social factor accounted for 21% of the variance in the ratings of the elementary teachers.

In a study on the teachers' and students' concepts of intelligence, Keats (1986) compared the rankings of the students and teachers from two cultures, the Chinese and the Australian and found substantial similarities across cultures. However there was a greater matching of the rankings of the Chinese students and their teachers than that found in the Australian sample. The present study represents a similar attempt involving a Malaysian sample. The study attemped to relate intelligence to every day perceptions of the teachers and the pupils. Specifically it sought to compare the conceptions of intelligence of students of different age groups and locations (urban and rural) as well as those of the students and their teachers. It is suggested that the classroom environment may provide the basis for extricating notions of intelligence as held by the teachers and the students.

METHODOLOGY

Sample

The sample consisted of 1192 students aged 12, 14 and 16 years old and a group of 205 teachers teaching these students. 598 of the student sample was located in urban schools while 594 in the rural schools.

Procedure

The study was conducted in two phases. In Phase 1, 196 students aged 12,14,16 years old and 25 teachers were asked to list the characteristics and behavior of an intelligent student. Their responses were compiled and related items were combined in order to reduce the number of items to manageable size.

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In this way 38 items were eventually obtained. Eight independent judges then classified the items into four major categories, namely General Abilities, Thinking Abilities, Interpersonal Skills and Personality. The category of 'General Abilities' which contains 9 items includes items such as getting good results, active in learning and co-curriculum, able to understand lesson easily, is fluent and is curious. The category of 'Thinking Abilities'also contains 9 items such as able to solve problem quickly and systematically ,able to understand concepts and ideas, good at giving opinions, creative and has good memory. The category of 'Interpersonal Skills' has 10 items such as being helpful, popular, knows how to please friend, heeds the advice of older persons, cooperative , is able to adjust and posseses leadreship skill. Finally, the category of 'Personality' also contains 10 items such as hardworking,good behaviour, honest, responsible, self-confident, ambitious and has discipline.

These 38 items were used to construct a questionnaire having a four point rating scale with 1 denoting 'very important' and 4 'not important at all'. The instructions on the questionnaire not only required the respondents to rate the items but also to rank the items within each category and finally to rank the four categories.

The questionnaire was pre-tested on a group of 12 and 14 year-olds and the necessary modifications in the wording of the items and instructions were made.

In Phase 2 of the study the questionnaire was administered to a group of 1192 students aged 12,14,16 years old and 205 teachers teaching these students.

Analysis of the data

Mean rating for each item was calculated for the whole student sample, for teachers alone, and for each of the student age groups. Further, Kendall rank order correlation coefficients were calculated for group comparisons. For the purpose of comparing the teachers' and the students' responses, the student sample was randomly selected from the larger student sample. In this way the smaller student sample obtained was comparative in size to the teacher sample. The means of the smaller student sample did not differ from the original student sample.

Results

Preliminary analyses of the data have yielded some of the following findings. For all groups the mean ratings for the majority of the items hovered between 1 to 1.95 indicating a rating between 'very important' to 'important.' Some of the items that were highly rated are 'gets good results', 'is able to use/manage time well', 'is able to understand lesson easily'. These items belong to the 'General Abilities' category. In the 'Thinking Abilities' category, the item highly valued is 'thinks carefully before doing', while in the 'Interpersonal Skills' category, the attributes considered very desirable are 'heeds the advice of older persons/respects older person' and 'likes to help'. With respect to 'Personality', three items that were

highly rated are 'hardworking/interested in lesson/does not skip school', 'behaves well, and 'honest/trustworthly/responsible'. The item that received an average rating between ' important' to 'not so important' is 'accepts opinion only if further explanation is provided' while the item 'gets bored easily with things that are simple' was given an average rating between 'not so important' to 'not important at all.'

In order to examine the agreement in ranking of items within groups Kendall's taus were computed for student age groups, urban versus rural students and for teacher versus student rankings.

[Table 1 about here]

As shown in Table 1 there is considerable agreement in ranking of attributes by age groups. Kendall's taus range between .60 to .88. Generally there appears to be more agreement between the 12 year-old group and the 14 year-old group than between these two groups and the 16 year-old group.

The trend is clearly illustrated in Table 2 which shows a slight variation in the ranking of items in all the four categories.

[Table 2 about here]

For instance among the items in the 'General Abilities', 'gets good results' was ranked as first by the 12 and 14 year-olds but was ranked as second by the 16 year-olds. The latter placed more importance on ability to use or manage time well. Ability to understand lesson easily was next emphasized by the 12 and 16 year-old students but was ranked fourth by the 14 year-olds. Nonetheless the three groups held more or less similar views about the last two items which were given very low ranking. These

items are 'likes to try new things' and 'is curious'.

The pattern of ranking of the items in the other three categories is again rather similar for these three age groups. Thus with respect to 'Thinking Ability', the three groups agreed that the ability to solve problems quickly and systematically and to think carefully before doing were two of the most important attributes of an intelligent student. In the realm of interpersonal relationship two attributes considered most important are 'likes to help' and 'heeds the advice of older persons/respects older persons' while the two attributes considered most important in the 'Personality' category are 'hardworking' and 'behaves well'. An interesting finding in this category is that in contrast to older students the younger students placed some emphasis on being 'smartly dressed/clean'. The older students ranked this attribute second from the bottom.

Apparently younger students' perceptions of intelligence to a certain extent was affected by the visibility and concreteness of the attributes.

However when the groups considered all the four categories simultaneously, they all agreed that the category 'Thinking Abilities' was the most important of all, followed by the categories of 'General Abilities', 'Personality' and 'Interpersonal Skills' in that order.

[Table 3 about here]

Table 4 compares the ranking of urban pupils with those of the rural pupils and there is considerable similarity between the two groups. The Kandell's taus range from .77 to .91 (see Table 1). Whilst there is considerable agreement between the urban and the

rural students, there are also some interesting variations especially in the area of interpersonal skills. The rural students placed a premium on 'needs advice/respects older persons' while the urban students put a high priority on 'likes to help'.

[Table 4 about here]

However when the four categories were considered together, the two groups held similar views about which category was the most important. Thus 'Thinking Abilities' was rated as the most important, followed by 'General Abilities', 'Personality' and 'Interpersonal Skills'.

[Table 5 about here]

A comparison of the teacher's and the students' ranking of the attributes was also made. The Kendell's tau was significant only for the category of 'Thinking Abilities' (see Table 1).

[Table 6 about here]

As shown in Table 6, for the other three categories, namely the 'General Abilities', the 'Interpersonal Skills' and the 'Personality',there appears to be some disagreement between the teachers' and the students' ranking of the attributes. For instance, for the 'General Abilities', the students registered 'gets good results' as the most important attribute. In contrast the teachers considered being able to understand lesson as being the most important. On the other hand the teachers placed considerable emphasis on the attribute 'is curious' which the students ranked last. However both agreed that being able to manage time well was a very important characteristic of an intelligent student.

With respect to the category 'Thinking Abilities' the teachers' and the students' ranking of the items appeared to agree somewhat. Nonetheless, there is minor variation. For instance the teachers placed 'is able to understand concepts and ideas','thinks carefully before doing,' and 'is able to solve problems quickly and systematically' in that order while the students gave 'thinks carefully before doing' top priority, followed by 'is able to solve problems quickly and systematically' and 'is able to understand concepts and ideas'. With regard to the 'Interpersonal Skills' the teachers and the students disagreed on a number of items. Thus while the teachers placed considerable emphasis on being cooperative, helpful, and able to adjust and to mix well, the students believed that heeding the advice of older persons, being helpful,cooperative and good at choosing friends be placed in the order. Finally the teacher thought that being popular was the least important attribute. The students also gave this item a low ranking ,that is second from the bottom.

Within the category 'Personality',both the teachers and the students agreed that the attribute 'hardworking/interested in lesson/does not skip school' was the most desirable attribute of an intelligent student. However they disagreed with regard to what should be the next important attributes. Thus the teachers placed the qualities 'is honest/turstworthy/responsible' and 'behaves well' as the next two desirable attributes while for the students the reverse was true. Further discordance can be detected in the ranking of the rest of the items with the exception of the item 'is ambitious' which both groups ranked

seventh.

Thus to the teachers being patient and being smartly dressed were not so important. In contrast the students ranked these two attributes as somewhat important. Further while the teachers ranked 'has discipline' and 'has innitiative' as somewhat important, the students ranked these items rather low. Nonetheless when the teachers and the students were asked to compare among the four categories, there was considerable consensus with regard to the ranking of the categories.

[Table 7 about here]

As shown in Table 7 both the teachers and the students agreed that 'Thinking Abilities' was the most important category followed by 'General Abilities','Personality' and 'Interpersonal Skills.'

Discussion

Preliminary analyses of the data have provided some insights into what the students and the teachers considered as the important attributes of an intelligent functioning student.

Overall both the teachers and the students agreed that 'Thinking Abilities' were the hallmark of an intelligent student. What they disagreed are which aspects of the thinking process were the most important. Thus while the teachers tended to emphasize understanding of ideas and concepts and thinking things carefully, the students placed more importance on thinking things and solving problems quickly and systematically. The difference in emphasis is not surprising considering the different roles

that the teachers and the students have to play. The teachers' concern is getting the students to understand the content of the lesson while the students' main concern is their ability to get the task completed correctly. This emphasis on outcome is even more evident in the students' and the teachers'ranking of the attributes in the 'General Abilities' category. The students considered getting good results as the most important attribute of an intelligent student while the teachers placed considerable stress on understanding the lesson easily. Getting good results was ranked fourth by the teachers. Thus the teachers tended to stress on the process of learning while the students tended to regard outcome as the evident of intelligence.

The discordance between the teachers and the students is also apparent in their ranking of the 'Personality' attributes. Although both agreed that 'Personality' was third in importance after 'Thinking Abilities', and that being hardworking was the most important personal characteristic, they could not agree on most of the other attributes. Also the students placed some emphasis on physical appearace particularly the 12 and the 14 year-old students. The 16 year-old students and the teachers placed very little value on this aspect of the 'Personality'. With regard to the category of the 'Interpersoanl Skills', both the teachers and the students perceived it as being the least important of all the four categories. Perhaps the emphasis on academic achievement prevalent in the Malaysian community has tended to focus the attention of both the students and the teachers on cognitive abilities at the expense of skills related

to interpersonal relationship.

The difference between the teachers' and their students'notions of intelligence is important because it reflects to what extent the attributes highly valued by the teachers are being transmitted to their students. The lack of consensus also probably indicates the mismatch between the teachers' and the students' expectations of one another.

The difference in the teachers' and the students' perceptions of intelligence may be due to a variety of factors. For example, teacher training and its ideal as reflected in the education courses that the teachers were exposed to and the experience that the teachers had gathered over the years versus the students' perceptions of the school life and their feelings about it could have contributed to this disparity. Further study and elaborations are needed in order to understand this disparity.

References

Fry,P.S.(1984b): Teachers' conceptions of students'intelligence and intelligent functioning : a cross-sectional study of elementary,secondary and tertiary level teachers. International_Journal_of_Psychology,19,457-474.

Keats,D.M. (1982): Cultural bases of concepts of intelligence: A Chinese versus Australian comparison. In Suvannathat et al (ed.).Proceedings:_Second_ Asian_ Workshop_ on _ Child_ and Adolescent_ Developmant,Bangkok, 68-74.

Keats,D.M. (1986): Cultural and generational differences in concepts of intelligence: implications for the school years in multicultural environemts. Paper presented atFourth_Asian Workshop_on_Child_and_Adolescent_Development,Singapore, June 1-7 ,1986.

Sternberg,R. et al (1981): Peoples'conceptions of intelligence. Journal_of_Personality_&_Social_Psychology,vol.4(1),37-55.

Table 1: Kendall's tau

Groups	Attributes			
	General Abilities	Thinking Abilities	Interpersonal Skills	Personality
12 yrs. vs. 14 yrs.	0.80	0.83	0.73	0.86
12 yrs. vs. 16 yrs.	0.77	0.77	0.60	0.73
14 yrs. vs. 16 yrs.	0.77	0.83	0.68	0.60
Urban Pupils vs. Rural Pupils	0.94	0.94	0.77	0.91
Teachers vs. Pupils	1 0.42	0.72	1 0.34	1 0.42

1 denotes p = n.s. at 0.05

Table 2: Students' Ranking of Attributes by Age Group

Attributes	Age 12 (N = 396)	14 (N = 403)	16 (N = 301)
General Abilities			
gets good results	1	1	2
is able to use /manage time well	2	2	1
is active in lesson and co-curriculua (e.g. sports,clubs, etc.)	4	3	4
likes to discuss things	5	5	6
likes to ask questions	7	6	5
is able to understand lesson easily	3	4	3
is fluent	6	7	7
likes to try new things/is innovative	8	8	9
is curious	9	9	8
Thinking Abilities			
is able to solve problems quickly and systematically	1	2	2
is able to understand concepts and ideas	3	3	3
is able to give opinions and views	5	4	7
is matured in thinking / his thinking is more advanced than his friends'	4	6	5
thinks carefully before doing	2	1	1
is creative /able to think new things	7	7	6
has good memory	6	5	4
accepts opinion only if further explanation is provided	8	8	8
gets bored easily with things that are simple	9	9	9

Attributes	Age 12 (N =396)	14 (N = 403)	16 (N = 381)
Interpersonal Skills			
likes to help	1	2	2
is good at choosing friends	3	4	4
is good at pleasing others	4	5	6
mixes well	6	8	5
is popular	8	6	8
heeds advice of older persons/ respects older persons	2	1	1
is good at giving advice to others	7	7	10
is cooperative	5	3	3
is able to adjust	10	10	7
possesses attributes of a leader	9	9	9
Personality			
is hardworking/interested in lesson/ does not skip school	1	1	1
behaves well/ polite/not proud/ is gentle	2	2	2
is honest, trustworthy/responsible	3	3	3
is smartly dressed, clean	5	4	9
is patient/does not give up easily	4	5	5
is ambitious	7	7	7
is independent/self-confident	9	10	6
is considerate	10	8	10
has initiative	8	9	8
has discipline	6	6	4

Table 3: Students' Ranking of Categories by Age

Categories	AGE		
	12	13	14
General Abilities	2	2	2
Thinking Abilities	1	1	1
Interpesonal Skills	4	4	4
Personality	3	3	3

Table 4: Students' Ranking of Attributes by Locality

Attributes	Locality	
	Urban (N = 599)	Rural (N = 594)
General Abilities		
gets good results	1	1
is able to use /manage time well	2	2
is active in lesson and co-curriculum (e.g. sports,clubs, etc.)	4	3
likes to discuss things	5	5
likes to ask questions	6	6
is able to understand lesson easily	3	4
is fluent	7	7
likes to try new things/is innovative	8	8
is curious	9	9
Thinking Abilities		
is able to solve problems quickly and systematically	2	2
is able to understand concepts and ideas	3	3
is able to give opinions and views	4	5
is matured in thinking / his thinking is more advanced than his friends'	5	4
thinks carefully before doing	1	1
is creative /able to think new things	7	7
has good memory	6	6
accepts opinion only if further explanation is provided	8	8
gets bored easily with things that are simple	9	9

Attributes	Locality	
	Urban	Rural
Interpersonal Skills		
likes to help	1	2
is good at choosing friends	4	3
is good at pleasing others	6	5
mixes well	5	6
is popular	7	8
heeds advice of older persons/ respects older persons	2	1
is good at giving advice to others	8	7
is cooperative	3	4
is able to adjust	9	10
possesses attributes of a leader	10	9
Personality		
is hardworking/interested in lesson/ does not skip school	1	1
behaves well/ polite/not proud/ is gentle	2	2
is honest, trustworthy/responsible	3	3
is smartly dressed,clean	6	5
is patient/does not give up easily	4	4
is ambitious	7	7
is independent/self-confident	8	9
is considerate	10	10
has initiative	9	8
has discipline	5	6

Table 5 : Students' Ranking of Categories by Locality

Categories	Locality	
	Urban (N = 598)	Rural (N = 594)
General Abilities	2	2
Thinking Abilities	1	1
Interpersonal Skills	4	4
Personality	3	3

Table 4: Teachers' and Students' Rankings of Attributes

Attributes	Teachers	Students
General Abilities		
gets good results	4	1
is able to use /manage time well	2	2
is active in lesson and co-curriculum (e.g. sports,clubs, etc.)	5	4
likes to discuss things	7	5
likes to ask questions	6	6
is able to understand lesson easily	1	3
is fluent	8	6
likes to try new things/is innonvative	9	8
is curious	3	9
Thinking Abilities		
is able to solve problems quickly and systematically	7	2
is able to understand concepts and ideas	1	3
is able to give opinions and views	7	4
is matured in thinking/his thinking is more advanced than his friends'	4	5
thinks carefully before doing	2	1
is creative /able to think new things	6	7
has good memory	5	6
accepts opinion only if further explanation is provided	8	8
gets bored easily with things that are simple	9	9

Attributes	Teachers	Students
Interpersonal-Skills		
likes to help	2	2
is good at choosing friends	6	4
is good at pleasing others	8	5
mixes well	4	6
is popular	10	8
heeds advice of older persons/ respects older persons	4	1
is good at giving advice to others	9	7
is cooperative	1	3
is able to adjust	3	9
possesses attributes of a leader	6	10
Personality		
is hardworking/interested in lesson/ does not skip school	1	1
behaves well/ polite/not proud/ is gentle	5	2
is honest, trustworthy/responsible	2	3
is smartly dressed,clean	10	5
is patient/does not give up easily	8	4
is ambitious	7	7
is independent/self-confident	6	8
is considerate	9	10
has initiative	5	9
has discipline	4	6

Table 7 Teachers' and Students' Ranking of Categories

Categories	Teachers (N = 205)	Students (N = 205)
General Abilities	2	2
Thinking Abilities	1	1
Interpersonal Skills	4	4
Personality	3	3

Table 8 Mean Ratings by Student Age Groups

Attributes	Student Age Groups					
	12 (N = 396)		14 (413)		16 (301)	
General Abilities	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
gets good results	1.32	0.53	1.32	0.48	1.41	0.55
is able to use /manage time well	1.70	0.66	1.45	0.55	1.49	0.53
is active in lesson and co-curriculum (e.g. sports,clubs etc)	1.95	0.74	1.83	0.64	1.69	0.61
likes to discuss things	2.16	0.85	1.93	0.72	1.78	0.69
likes to ask questions	2.40	0.96	1.89	0.69	1.79	0.61
is able to understand lesson easily	1.44	0.69	1.52	0.63	1.51	0.56
is fluent	1.74	0.80	1.68	0.70	1.62	0.65
likes to try new things/is innonvative	1.96	0.85	1.97	0.73	1.96	0.68
is curious	2.20	0.87	1.95	0.78	1.77	0.68

	Student Age Groups					
	12 (N = 396)		14 (413)		16 (381)	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Thinking Abilities						
is able to solve problems quickly and systematically	1.53	0.66	1.59	0.59	1.57	0.60
is able to understand concepts and ideas	1.81	0.71	1.79	0.63	1.79	0.59
is able to give opinions and views	1.79	0.79	1.80	0.67	1.84	0.62
is matured in thinking / his thinking is more advanced than his friends'	1.70	0.80	1.82	0.71	1.87	0.62
thinks carefully before doing	1.37	0.65	1.37	0.61	1.29	0.53
is creative/able to think new things	1.91	0.78	1.86	0.71	1.87	0.67
has good memory	1.60	0.76	1.59	0.67	1.63	0.67
accepts opinion only if further explanation is provided	2.23	0.80	2.13	0.70	2.14	0.73
gets bored easily with things that are simple	3.17	0.91	3.01	0.84	3.07	0.83
Interpersonal Skills						
likes to help	1.37	0.57	1.42	0.54	1.50	0.56
is good at choosing friends	2.02	0.72	1.90	0.65	1.78	0.70
is good at pleasing others	1.88	0.79	2.09	0.80	2.06	0.84
mixes well	2.11	0.81	2.05	0.86	1.91	0.74
is popular	1.86	0.82	1.85	0.74	1.89	0.71
heeds advice of older persons/ respects older persons	1.18	0.51	1.24	0.52	1.28	0.49
is good at giving advice to others	1.87	0.69	1.84	0.62	1.97	0.56
is cooperative	1.42	0.58	1.44	0.55	1.46	0.55
is able to adjust	1.93	0.75	1.73	0.66	1.73	0.63
possesses attributes of a leader	1.84	0.81	1.89	0.77	1.99	0.79

	Student Age Group: 12 (N = 396)		14 (413)		16 (291)	
Personality	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
is hardworking/interested in lesson/ does not skip school	1.16	0.48	1.19	0.48	1.20	0.40
behaves well/polite/not proud/ is gentle	1.48	0.59	1.42	0.63	1.47	0.64
is honest,trustworthy/responsible	1.23	0.56	1.30	0.55	1.22	0.45
is smartly dressed,clean	1.60	0.66	1.44	0.59	1.60	0.60
is patient/does not give up easily	1.58	0.66	1.51	0.66	1.39	0.53
is ambitious	1.70	0.77	1.64	0.75	1.65	0.68
is independent/self-confident	1.79	0.68	1.69	0.66	1.58	0.60
is considerate	1.65	0.64	1.59	0.59	1.61	0.54
has initiative	1.57	0.69	1.70	0.66	1.61	0.54
has discipline	1.38	0.67	1.36	0.61	1.28	0.47

Table 9 Mean Ratings of Urban Vs. Rural Students

Attributes	Urban (N = 598)		Rural (N = 594)	
General Abilities	$\bar{X}$	S.D.	$\bar{X}$	S.D.
gets good results	1.38	0.54	1.32	0.50
is able to use /manage time well	1.58	0.59	1.52	0.59
is active in lesson and co-curriculum (e.g. sports,clubs etc)	1.86	0.67	1.79	0.67
likes to discuss things	1.98	0.75	1.94	0.75
likes to ask questions	2.03	0.81	2.02	0.83
is able to understand lesson easily	1.54	0.64	1.45	0.61
is fluent	1.74	0.72	1.60	0.71
likes to try new things/is innonvative	1.96	0.72	1.96	0.79
is curious	1.98	0.82	1.97	0.78

Attributes	Urban (N = 598)		Rural (N = 594)	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Thinking Abilities				
is able to solve problems quickly and systematically	1.63	0.63	1.59	0.60
is able to understand concepts and ideas	1.79	0.66	1.80	0.65
is able to give opinions and views	1.80	0.70	1.82	0.68
is matured in thinking / his thinking is more advanced than his friends'	1.89	0.71	1.70	0.71
thinks carefully before doing	1.39	0.62	1.30	0.57
is creative/able to think new things	1.92	0.73	1.84	0.71
has good memory	1.70	0.75	1.51	0.64
accepts opinion only if further explanation is provided	2.18	0.74	2.15	0.75
gets bored easily with things that	3.05	0.85	3.11	0.88
gets bored easily with things that are simple	3.05	0.85	3.11	0.88
Interpersonal Skills				
likes to help	1.43	0.56	1.43	0.56
is good at choosing friends	1.89	0.76	1.85	0.63
is good at pleasing others	2.07	0.83	1.95	0.79
gives well	2.04	0.80	2.01	0.81
is popular	1.92	0.70	1.91	0.81
needs advice of older persons/ respects older persons	1.24	0.49	1.23	0.53
is good at giving advice to others	1.90	0.67	1.88	0.59
is cooperative	1.40	0.54	1.42	0.57
is able to adjust	1.79	0.69	1.81	0.69
possesses attributes of a leader	1.93	0.80	1.88	0.79

Attributes	Urban (N = 590)		Rural (N = 594)	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Personality				
is hardworking/interested in lesson/ does not skip school	1.10	0.40	1.20	0.40
behaves well/polite/not proud/ is gentle	1.46	0.63	1.39	0.60
is honest,trustworthy/responsible	1.09	0.52	1.28	0.53
is smartly dressed,clean	1.55	0.61	1.59	0.64
is patient/does not give up easily	1.50	0.63	1.49	0.62
is ambitious	1.60	0.71	1.72	0.73
is independent/self-confident	1.70	0.66	1.63	0.64
is considerate	1.64	0.61	1.54	0.57
has initiative	1.69	0.68	1.57	0.60
has discipline	1.37	0.62	1.31	0.57

Table 10 : Mean Ratings of Teachers and Students

Attributes	Teacher (N = 205)		Student (N = 205)	
	$\bar{x}$	S.D.	$\bar{x}$	S.D.
General Abilities				
gets good results	1.83	0.69	1.37	0.53
is able to use /manage time well	1.67	0.64	1.56	0.61
is active in lesson and co-curriculum (e.g. sports,clubs etc)	1.92	0.63	1.87	0.66
likes to discuss things	1.99	0.89	1.93	0.79
likes to ask questions	1.92	0.76	2.08	0.83
is able to understand lesson easily	1.63	0.57	1.48	0.65
is fluent	1.89	0.69	1.70	0.76
likes to try new things/is innonvative	2.00	0.70	2.00	0.81
is curious	1.82	0.66	1.95	0.79
Thinking Abilities				
is able to solve problems quickly and systematically	1.80	0.73	1.62	0.61
is able to understand concepts and ideas	1.81	0.68	1.86	0.66
is able to give opinions and views	2.02	0.70	1.85	0.73
is matured in thinking / his thinking is more advanced than his friends'	1.97	0.69	1.77	0.73
thinks carefully before doing	1.67	0.69	1.30	0.57
is creative /able to think new things	1.99	0.70	1.92	0.74
has good memory	1.89	0.70	1.82	0.73
accepts opinion only if further explanation is provided	2.35	0.72	2.19	0.70
gets bored easily with things that are simple	2.87	0.79	3.09	0.82

Attributes	Teacher		Student	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Interpersonal Skills				
likes to help	2.03	0.71	1.47	0.60
is good at choosing friends	2.15	0.68	1.73	0.64
is good at pleasing others	2.54	0.70	1.99	0.72
cares well	2.10	0.70	1.64	0.67
is popular	2.35	0.75	1.88	0.76
heeds advice of older persons/ respects older persons	1.07	0.74	1.26	0.53
is good at giving advice to others	2.21	0.77	1.86	0.60
is cooperative	1.79	0.64	1.45	0.54
is able to adjust	1.85	0.66	1.77	0.69
possesses attributes of a leader	2.23	0.71	1.94	0.83
Personality				
is hardworking/interested in lesson/ does not skip school	1.45	0.62	1.18	0.48
behaves well/ polite/not proud/ is gentle	1.73	0.72	1.43	0.62
is honest, trustworthy/responsible	1.62	0.65	1.34	0.60
is smartly dressed,clean	2.05	0.63	1.60	0.65
is patient/does not give up easily	1.75	0.65	1.50	0.65
is ambitious	1.76	0.81	1.66	0.70
is independent/self-confident	1.67	0.66	1.71	0.67
is considerate	1.98	0.70	1.61	0.62
has initiative	1.69	0.64	1.62	0.64
has discipline	1.98	0.69	1.57	0.64